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## I claim:

- A method of producing optical emissions from a target source, comprising the steps of: forming a metallic solution at room temperature; passing the metallic solution into a target source; and
- irradiating the target source with a high energy source to produce optical emissions that are debris free and cannot cause debris damage to surrounding components.
  - 2. The method of claim 1, wherein the high energy source includes: a laser source.
- The method of claim 1, wherein the optical emissions include: X-rays.
  - 4. The method of claim 1, wherein the optical emissions include: EUV(extreme ultraviolet) wavelength emissions.
- 15 5. The method of claim 1, wherein the optical emissions include: XUV wavelength emissions.
  - 6. The method of claim 1, wherein the step of passing includes: forming microscopic droplets.
  - 7. The method of claim 6, wherein the microscopic droplets each include: diameters of approximately 30 micrometers to approximately 90 micrometers.
  - 8. The method of claim 7, wherein the microscopic droplets each include: diameters of approximately 40 micrometers to approximately 80 micrometers.
  - 9. The method of claim 1, wherein the metallic solution includes:

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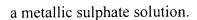
- 10. The method of claim 7, wherein the metallic chloride solution includes: ZnCl(zinc chloride).
- 11. The method of claim 7, wherein the metallic chloride solution includes: CuCl(copper chloride).
- 12. The method of claim 7, wherein the metallic chloride solution includes:

  SnCl(tin chloride).
  - 13. The method of claim 7, wherein the metallic chloride solution includes: AlCl(aluminum chloride).
  - 14. The method of claim 1, wherein the metallic solution includes: a metallic bromide solution.
  - 15. The method of claim 14, wherein the metallic bromide solution includes: CuBr(copper bromide).
  - 16. The method of claim 14, wherein the metallic bromide solution includes: ZnBr(zinc bromide).
  - 17. The method of claim 14, wherein the metallic bromide solution includes: SnBr(tin bromide).
  - 18. The method of claim 1, wherein the metallic solution includes:

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- 19. The method of claim 18, wherein the metallic sulphate solution includes: CuSO4(copper sulphate).
- 20. The method of claim 18, wherein the metallic sulphate solution includes: ZnSO4(zinc sulphate).
- The method of claim 18, wherein the metallic sulphate solution includes:
   SnSO4(tin sulphate).
  - 22. The method of claim 1, wherein the metallic solution includes: a metallic nitrate solution.
  - 23. The method of claim 22, wherein the metallic nitrate solution includes: CuNO3(copper nitrate).
  - 24. The method of claim 22, wherein the metallic nitrate solution includes: ZnNO3(zinc nitrate).
  - 25. The method of claim 22, wherein the metallic nitrate solution includes: SnNO3(tin nitrate).
  - 26. The method of claim 1, wherein the room temperature includes: approximately 10 degrees C to approximately 30 degrees C.
  - 27. The method of claim 1, wherein the optical emissions include:

- 28. The method of claim 1, wherein the optical emissions include: approximately 13nm.
- 29. The method of claim 1, wherein the metallic solution includes: an organo-metallic solution.
- 30. The method of claim 29, wherein the organo-metallic solution includes: CHBr3(Bromoform).
  - 31. The method of claim 29, wherein the organo-metallic solution includes: CH2I2(Diodomethane).
  - 32. The method of claim 1, wherein the metallic solution includes: SeO2(Selenium Dioxide).
  - 33. The method of claim 1, wherein the metallic solution includes: ZnBr2 (Zinc Dibromide).
  - 34. A method of generating optical emissions from metallic point sources, comprising the steps of:

forming microscopic liquid metal droplets at room temperature without heating the droplets;

25 passing the droplets into individual target sources;

irradiating the individual target sources with a laser beam having substantially identical diameter to each of the individual droplets; and

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producing optical emissions from the irradiated target sources without debris damage to surrounding components.

- 35. The method of claim 34, wherein each of the microscopic liquid metal droplets include: metallic chloride solutions.
- 36. The method of claim 34, wherein each of the microscopic liquid metal droplets include: metallic bromide solutions.
- The method of claim 34, wherein each of the microscopic liquid metal droplets include: metallic sulphate solutions.
  - 38. The method of claim 34, wherein each of the microscopic liquid metal droplets include: metallic nitrate solutions.
  - 39. The method of claim 34, wherein each of the microscopic liquid metal droplets include: an organo-metallic solution.
  - 40. The method of claim 34, wherein the room temperature includes: approximately 10 degrees to approximately 30 degrees C.
  - 41. The method of claim 34, wherein the optical emissions include: approximately 11.7nm.
- 25 42. The method of claim 34, wherein the optical emissions include: approximately 13nm.